

Abstract

A pure vacuum swing adsorption system and unique apparatus means wherein supplied feedstock mixtures of molecular gases can be consistently separated with a high purity end-product gas obtained with a minimum system consumption of electrical power. In the particular case of air separation, the described system and unique apparatus means herein provides a method by which a high purity oxygen product can be separated from air within sequenced adsorption and desorption operations occurring exclusively under vacuum pressure conditions to obtain greatly reduced kilowatt-hours of electric power consumption per hourly or daily oxygen ton production rates.